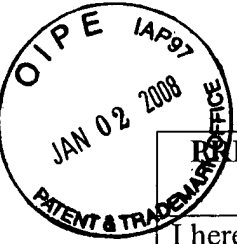


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PTO/SB/33 (07-05)

United States Patent & Trademark Office; U.S. DEPARTMENT OF COMMERCE

RE-APPEAL BRIEF REQUEST FOR REVIEW	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on _____ Signature _____ Typed or printed Name _____	Docket Number (Optional) 089229.00123
	Application Number: 10/083,448
	Filed: February 25, 2002
	First Named Inventor: Charles E. PERKINS
	Art Unit: 2134 Examiner: Andrew L. Nalven

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

- ☐ Applicant/Inventor.
- ☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed
- ☒ Attorney or agent of record.
Registration No. 58,178
- ☐ Attorney or agent acting under 37 CFR 1.34.
Reg. No. is acting under 37 CFR 1.34 _____

Peter Flanagan
Signature

Peter Flanagan
Typed or printed name

703.720.7864
Telephone number

January 2, 2008
Date

NOTE: Signatures of all of the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 1 forms are submitted.



THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

Confirmation No.: 6051

Charles E. PERKINS et al.

Art Unit: 2134

Application No.: 10/083,448

Examiner: Andrew L. Nalven

Filed: February 25, 2002

Attorney Dkt. No.: 089229.00123

For: SYSTEM AND METHOD FOR STRONG AUTHENTICATION ACHIEVED IN A SINGLE ROUND TRIP

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

January 2, 2008

Sir:

In accordance with the Pre-Appeal Brief Conference Pilot Program guidelines set forth in the Official Gazette Notice dated July 12, 2005, Applicants hereby submit this Pre-Appeal Brief Request for Review of the final rejections of claims 1, 2 and 4-21 in the above identified application. Claims 1, 2 and 4-21 were finally rejected in the Office Action dated August 2, 2007. Applicants filed a Response to the Final Office Action on December 3, 2007, and the Office issued an Advisory Action dated December 26, 2007, maintaining the final rejections of claims 1, 2 and 4-21. Applicants hereby appeal these rejections and submit this Pre-Appeal Brief Request for Review.

Claims 1-5, 10-13, and 19-21 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,887,251 of Fehnel ("Fehnel") in view of U.S. Patent No. 6,678,281 of Chakrabarti ("Chakrabarti") and "Global Authentication" of Marcovici et al. ("Marcovici"). Applicants request that this rejection be reversed as erroneous.

Clear Error 1 – No disclosure in Prior Art of Mutual Authentication in Single Round Trip

Certain embodiments of the present invention advantageously provide single round trip authentication of a roaming mobile node using a random number generated by a base station of a foreign network (*i.e.* not the network of the mobile node).

The combination of cited references (Fehnel in view of Chakrabarti and Marcovici) fails to disclose or suggest all of the elements of any of the presently pending claims, and, thus, fails to provide these critical and non-obvious advantages.

Claim 1, for example, recites “wherein the authenticating the mobile node to the network and the authenticating the network to the mobile node is performed in a single round trip while the mobile node is roaming.” This feature is neither disclosed nor suggested in Fehnel. The Office Action recognized that Fehnel has certain deficiencies (including this deficiency) and, therefore, cited Chakrabarti and Marcovici. Furthermore, with respect to this feature, the Office Action acknowledged that Chakrabarti fails to remedy this deficiency of Fehnel and cited Marcovici to remedy this and other deficiencies of the combination of Fehnel and Chakrabarti.

Marcovici generally relates to two proposals for allegedly enhanced subscriber architectures, 3GPP-AKA (based on GSM MAP) and LESA (based on ANSI-41). One of Marcovici’s proposals (4.1) relates to authentication and session key agreement. This proposal, however, follows a proposal (3.1) for key provisioning. Indeed, Marcovici, at page 4, section 4, indicates that the proposal in 4.1 follows the procedure described in 3.1 (“Once the SSD is established, it can be used to conduct operational procedures defined in this section.”).

Marcovici describes an authentication process in Figure 4.1.1-1 that includes a single round trip from the mobile station to a home location register (via a VLR) and back. However, only a single validation is performed in the process as described (at step (e) the “Network Signature” is authenticated by the mobile), and the mobile station is not described as providing a signature.

Thus, clear distinctions exist between Marcovici’s disclosure and what is claimed as “wherein the authenticating the mobile node to the network and the authenticating the network to the mobile node is performed in a single round trip while the mobile node is roaming” as recited in claim 1.

More particularly, Marcovici’s disclosure indicates that the procedure shown in Figure 4.1.1-1 is performed **after** the secondary security keys are established between the mobile station and the HLR via the VLR. Accordingly, the process described by Marcovici in Figure 4.1.1-1 is not a procedure in which both the mobile node is authenticated to the network and the network is authenticated to the mobile node.

Instead, as described by Marcovici, the round trip procedure only provides a signature from the network to the mobile and only authenticates the network to the mobile.

Accordingly, Marcovici does not remedy the above-identified deficiencies of Fehnel and Chakrabarti with respect to “wherein the authenticating the mobile node to the network and the authenticating the network to the mobile node is performed in a single round trip while the mobile node is roaming” as recited in claim 1.

The Office Action, at pages 2-3, item 3, disputed the distinction above. The Office Action’s position was that Fehnel discloses authenticating the mobile node to a network, and Marcovici discloses authenticating the network to the mobile node in a single round trip while the mobile node is roaming. Such teachings, however, amount to a disclosure to authenticate the mobile node to a network and then authenticate the network to the mobile node, which is (more or less) just what Marcovici alone discloses. As far as this feature is concerned, Fehnel does not add anything to Marcovici. Even if the second authentication is done in a single round trip, and even if the authentication of the mobile node to a network were disclosed as being done in a single round trip (not admitted, and not even asserted in the Office Action), there would still be two round trips, not a single a round trip to accomplish mutual authentication, because one round trip plus one round trip is two round trips.

To put it another way, such teaching would (not admitted) disclose a single round trip for each authentication. In contrast, the presently pending claims require a single round trip for both authentications, not each authentication.

Thus, a conclusion of obviousness of what is claimed is not warranted, because nothing in the cited references discloses or (in any way) suggests performing both the authentication of the mobile to the network and the network to the mobile in a single round trip. Accordingly, Applicants continue to respectfully request that the rejection be reversed as clearly improper.

Clear Error 2 – References Combined without a Legally Sufficient Reason (such as, for example, teaching, motivation, or suggestion)

Furthermore, the combination of cited references constitutes impermissible hindsight reconstruction. The Office Action asserted that it would have been obvious to combine the teachings of the three references, citing Marcovici’s assertion that Marcovici’s proposal provides

enhanced security at page 2, section 1, and citing Chakrabarti's assertion that GPRS provides better support for bursty data.

The cited motivation in Chakrabarti is just a generally positive statement regarding the value of GPRS, not a teaching, motivation, or suggestion to modify the authentication process described by Fehnel. Furthermore, the proposed motivation relates to data traffic, but Fehnel is directed to a system that primarily targets voice communications, as can be seen from column 1, lines 12-26. Accordingly, one of ordinary skill in the art having Fehnel's objects in mind would not be motivated to modify Fehnel's authentication process based on the disclosure of Chakrabarti, because it would not be expected to effect the objects of Fehnel's disclosure.

Moreover, the proposed motivation to combine Marcovici's disclosure with that of Fehnel and/or Chakrabarti is also legally insufficient. The proposed motivation is to enhance security. In contrast, however, the teaching for which Marcovici is principally cited (*i.e.* performing the authentication in a single-round) is not a modification that one of ordinary skill in the art would expect to enhance security. Accordingly, the proposed motivation does not relate to the teaching selected from the cited reference.

Additionally, the alleged enhancement of security proposed by Marcovici would suggest, if anything, that one of ordinary skill in the art simply use Marcovici, not that one of ordinary skill in the art modify the teachings of Fehnel based on the disclosure of Marcovici. For this additional reason, the proposed motivation to combine is legally insufficient.

At page 3, item 4, in the "Response to Arguments" section, the Office Action asserted that "combining Chakrabarti and Marcovici would provide the advantages of enhancing security providing support for new generations of cellular technology (Marcovici, page 2, section 1) and provide for more efficient support of the transmission of bursts of data thus improving cost effectiveness of the cellular network (Chakrabarti, column 2, lines 15-35)." These assertions, however, are not supported by the cited references. Instead, as discussed above, the cited references address the reasons for using the disclosed embodiments of the individual references, not using the disclosed embodiments in combination with other references.

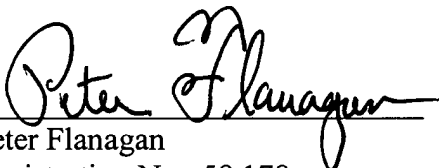
The Office Action continued by asserting that "These are positive benefits that would have motivated one of ordinary skill in the art to combine. Improving data traffic and security are advantages that would have been attractive to one of ordinary skill in the art." Nevertheless,

as noted above, those advantages are not alleged to accrue to the combination of references, but to the practice of the individual references. Accordingly, even if one of ordinary skill in the art would have had plenty of motivation to practice each of the cited references, one of ordinary skill in the art would still not have had motivation to combine the teachings of the references. Thus, the proposed motivation does not provide a *prima facie* case of obviousness, and it is respectfully requested that the rejection be reversed in the face of this clear error.

The other rejections of the other claims each suffer from the errors above, and some suffer from additional errors, but the page length for this document prevents setting them forth in detail. See, for example; pages 12-14, of the Response filed December 3, 2007.

Reconsideration and withdrawal of the rejections, in view of the clear errors in the Office Action, is respectfully requested. In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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PCF/cqc

Enclosures: Form PTO/SB/33;
Notice of Appeal;
Petition for Extension of Time;
Check No. 017835